National Institute of Environmental Health Sciences

Forest ecosystem assessment, changes in biodiversity and climate change in a densely populated region (Flanders, Belgium)

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Abstract:

Throughout the world, forest covers one-third of the land's area. Present and historical human activities caused tremendous land use changes and triggered the onset of unseen climate changes. Yet, these socio-economically based environmental changes interfere with services that forests provide to mankind from global to local scales. Densely populated regions such as Flanders (Belgium), with over 430 people perkm2, have the dubious honour to serve as examples of extreme human induced forest changes. The issue of forest biodiversity is reviewed in the light of the Millennium Ecosystem Assessment scheme. Flanders is a poorly forested region (11% forest cover); supporting services are consequently low. Merely 16% of that area has known 230 years of continuous forest cover, representing forest with the highest current biodiversity. Also, the demands for regulating services are growing and the limits may have been reached. Provisioning services may increase again in future when demands for, for example bio-energy, increase. Cultural services, particularly the recreational function, have increased greatly. Human well-being in Flanders partly depends on the services provided by forest ecosystems. However, as demands on forests are huge, a shift to a sustainable use of forest resources will be essential to assure its beneficial role for present and future generations.

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Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Ecosystem Changes

Geographic Feature:

resource focuses on specific type of geography

Other Geographical Feature

Other Geographical Feature : Forests

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Europe

European Region/Country: European Country

Other European Country : Belgium

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Mental Health/Stress, Other Health Impact

Other Health Impact: Well-being

Resource Type: ☑

format or standard characteristic of resource

Review

Timescale: ☑

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment: ☑

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content